

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently amended) A method for providing an inbound call control service to a public switched telephone network (PSTN) inbound call control service subscriber, the method comprising:

configuring a directory number of the inbound call control service subscriber as a locally ported directory number in accordance with a Local Number Portability deployment, so that all calls to the directory number are routed through the PSTN to a call service node (CSN) that is a virtual service switching point in the PSTN;

receiving a call initiation message at ~~the a call service node (CSN)~~, the call initiation message being associated with a call from a caller directed to who dialed a the locally ported directory number of the inbound call control service subscriber;

extracting a called number from the call initiation message, and using the called number to identify~~identifying~~ the inbound call control service subscriber associated with the called number by ~~extracting the called number from the call initiation message and~~ using the called number in a query to retrieve a an inbound call control service subscriber profile that stores default information about how calls to the inbound call control service subscriber are to be handled;

issuing an inbound call notification message over a messaging network from the CSN to at least one messaging device operated by the inbound call control service subscriber, the inbound call notification message providing information related to the inbound call and requesting that the inbound call control service subscriber select a call treatment option for the inbound call;

while waiting for a reply to the inbound call notification message, ~~routing~~
modifying the inbound call initiation message to forward the call to a call
parking facility associated with the inbound call service, and forwarding the
modified inbound call initiation message from the CSN to forward the call
~~to a call parking facility associated with the service through the PSTN to~~
forward the call to the call parking facility;

receiving from the inbound call control service subscriber a reply to the
inbound call notification message indicating the call treatment option
selected by the inbound call control service subscriber in response to the
inbound call notification message;

controlling the parked call by sending a call release message from the CSN to
through the PSTN to the call parking facility to release the call from the call
parking facility; and

further controlling the call using call control messages sent from the CSN
through the PSTN to control the released call in accordance with the call
treatment option selected by the inbound call control service subscriber in
response to the inbound call notification message.

2. (Currently amended) The method as claimed in claim 1 wherein prior to
receiving the call initiation message at the CSN, the method further comprises
steps of:

receiving a dialed number at a service switching point that serves a calling party
that initiated the inbound call;

translating the dialed number and determining that the dialed number is ~~a the~~
locally ported number in accordance with a Local Number Portability (LNP)
deployment;

querying a service control point for routing instructions for completing the call
to the dialed number; and

formulating the call initiation message in response to receipt of the routing instructions from the service control point.

3. (Previously presented) The method as claimed in claim 2 wherein formulating the call initiation message comprises formulating an Initial Address Message containing a conversion number and a routing code for routing the Initial Address Message to the CSN.
4. Cancelled.
5. (Currently amended) The method as claimed in claim 1 wherein issuing ~~an~~the inbound call notification message comprises:

examining the inbound call control service subscriber profile to identify at least one messaging network address specified by the inbound call control service subscriber; and

formulating and sending an inbound call notification message to each messaging network address specified in the inbound call control service subscriber profile, a format of each inbound call notification message being determined by characteristics of the messaging network through which the inbound call notification message is sent.
6. (Previously presented) The method as claimed in claim 1 wherein routing the call to a call parking facility comprises forwarding the call to an announcement player that requests that the caller wait while the call is being processed.
7. (Previously presented) The method as claimed in claim 1 wherein routing the call to a call parking facility comprises forwarding the call to a voice mail box.
8. (Currently amended) The method as claimed in claim 7 wherein the reply received from the inbound call control service subscriber requests voice mail monitoring and the method further comprises:

activating a trunk monitor connected to a trunk facility through which the call is routed; converting monitored content into a format compatible with a one of the at least one client device from which the reply was received; and forwarding the converted monitored content to the client device from which the reply was received, to permit the inbound call control service subscriber to listen to the voice mail message in real time.

9. (Original) The method as claimed in claim 8 wherein converting monitored content comprises converting pulse code modulated data to a streaming audio format.

10. (Currently Amended) The method as claimed in claim 7 wherein routing the call to a call parking facility comprises:

extracting the called number from the call initiation message and using the called number in a query to retrieve a the service subscriber profile;

extracting a calling party number from the call initiation message;

searching the ~~caller~~ service subscriber profile to determine whether the calling party number is associated with a specific voice mail box to which the call is to be forwarded; and

if the calling party number is associated with a specific voice mail box, routing the inbound call to the specific voice mail box, otherwise forwarding the call to one of an announcement player and a default voice mail box specified in the service subscriber profile.

11. (Currently amended) The method as claimed in claim 10 wherein routing the call to the voice mail box comprises modifying the call initiation message by inserting an address of the voice mail box into a called number field of the call initiation message, and inserting ~~aan~~ an inbound call control service subscriber telephone number associated with the voice mail box in a redirecting number field of the call initiation message, if the inbound call control subscriber

- telephone number associated with the voice mail box is different from the dialed telephone number in the original called number field of the call initiation message.
12. (Currently amended) The method as claimed in claim 1 wherein controlling the call using call control messages sent from the CSN in accordance with the call treatment option selected by the inbound call control service subscriber in response to the inbound call notification message comprises reconnecting the call to a telephone number specified in the reply, if the reply is received before a predetermined period of time lapses, and applying a default call treatment option specified in the service subscriber profile if the reply is not received before the predetermined period of time lapses.
13. (Original) The method as claimed in claim 12 wherein the default call treatment option is determined by a time of day and day of week.
14. (Original) The method as claimed in claim 12 wherein the default call treatment option is forwarding the call to a voice mail box.
15. (Currently amended) The method as claimed in claim 12 wherein reconnecting the call to a telephone number specified in the reply comprises one of: reconnecting the call to a directory number specified in the service subscriber profile; reconnecting the call to a service-subscriber-selected one of a plurality of telephone numbers specified in the service subscriber profile; and, reconnecting the call to a telephone number supplied by the inbound call control service subscriber in the reply to the inbound call notification message.
16. (Currently amended) The method as claimed in claim 1 further comprising storing a number of a calling party that initiated the inbound call so that if the reply to the inbound call notification is received after the calling party has terminated the inbound call, the CSN can use information in the reply and the

stored number of the calling party to automatically establish a call between the inbound call control service subscriber and the calling party.

17.-25. Cancelled.

26. (Currently amended) A method for providing single number service to a public switched telephone network (PSTN) single number service subscriber, comprising:

configuring a directory number of the single number service subscriber as a locally ported directory number in accordance with a Local Number Portability deployment, so that all calls to the locally ported directory number are routed through the PSTN to a call service node (CSN) that is a virtual service switching point in the PSTN;

receiving a call initiation message at ~~the call service node (CSN)~~, the call initiation message being associated with a call from a caller directed to who dialed a service subscriber the locally ported directory number;

extracting a called number from the call initiation message, and using ~~the called number to identify the service subscriber;~~

~~using the called number in a query to retrieve a service subscriber profile that~~ stores default information about how calls to the single number service subscriber are to be handled;

issuing an inbound call notification message over a messaging network from the CSN to at least one messaging device operated by the single number service subscriber, the inbound call notification message providing information related to the inbound call and requesting that the single number service subscriber select a call treatment option for the inbound call;

while waiting for a reply to the inbound call notification message, routing the call initiation message from the CSN through the PSTN to forward the call

to a call parking facility in the PSTN that is associated with the single number service;

receiving from the single number service subscriber a reply to the inbound call notification message indicating the call treatment option;

further controlling the inbound call by sending call control messages from the CSN through the PSTN to control the inbound call in accordance with the call treatment option selected by the single number service subscriber in response to the inbound call notification message.

27. (Currently amended) The method as claimed in claim 26 wherein prior to receiving the call initiation message at the CSN, the method further comprises steps of:

receiving a dialed number at a service switching point that serves ~~a the calling party that initiated the inbound call~~ who dialed the locally ported directory number;

translating the dialed number and determining that the dialed number is ~~at the locally ported directory number in accordance with a Local Number Portability (LNP) deployment~~;

querying a service control point for routing instructions for completing the call to the dialed number; and

formulating the call initiation message in response to receipt of the routing instructions from the service control point.

28. (Previously presented) The method as claimed in claim 26 wherein the call initiation message comprises an Initial Address Message containing a conversion number and a routing code for routing the Initial Address Message to the CSN.

29. (Currently amended) The method as claimed in claim 26 wherein the default information about how calls to the single number service subscriber are to be handled comprises:
- a plurality of directory numbers respectively associated with the single number service subscriber and other default information about how calls to the single number service subscriber are to be handled.
30. (Currently amended) The method as claimed in claim 29 wherein issuing an inbound call notification message comprises:
- examining the service subscriber profile to identify at least one messaging network address specified by the single number service subscriber; and
- formulating and sending an inbound call notification message to each messaging network address specified in the service subscriber profile, a format of each inbound call notification message being determined by characteristics of the messaging network through which the inbound call notification message is sent, and each inbound call notification message containing a list of the directory numbers associated with the single number service subscriber.
31. (Currently amended) The method as claimed in claim 30 further comprising formulating the inbound call notification message to include an option to permit the single number service subscriber to specify a directory number that is different from the plurality of directory numbers in the service subscriber profile.
32. (Previously presented) The method as claimed in claim 30 wherein routing the call initiation message from the CSN to forward the call to a call parking facility comprises routing the call to an announcement player that requests that the caller wait while the call is being processed.

33. (Currently amended) The method as claimed in claim ~~26-28~~ wherein routing the call initiation message from the CSN to forward the call to a call parking facility comprises routing the call to a voice mail box.
34. (Previously presented) The method as claimed in claim 33 wherein routing the call initiation message from the CSN to route the call to a call parking facility comprises:
- extracting the conversion number from the call initiation message and using the conversion number in a query to retrieve the service subscriber profile;
- extracting a calling party number from the call initiation message;
- searching the caller profile to determine whether the calling party number is associated with a specific voice mail box to which the call is to be forwarded; and
- if the calling party number is associated with a specific voice mail box, routing the call initiation message from the CSN to forward the inbound call to the specific voice mail box, otherwise routing the call initiation message from the CSN to forward the call to one of an announcement player and a default voice mail box specified in the service subscriber profile.
35. (Currently amended) The method as claimed in claim 34 wherein routing the call initiation message from the CSN to forward the call to the voice mail box comprises modifying the call initiation message by inserting an address of the voice mail box into a called party number field of the call initiation message, and inserting a one of the single number subscriber telephone numbers associated with the voice mail box in a redirecting number field of the call initiation message, if the single number service subscriber telephone number associated with the voice mail box is different from the client telephone number in the called number field of the call initiation message.

36. (Currently amended) The method as claimed in claim 29 wherein further controlling the call by sending call control messages from the CSN comprises sending a call release message to release the call from the call parking facility and sending a call control message from the CSN to forward the call to the directory number specified in the reply, if the reply is received before a predetermined period of time lapses, and sending a call control message from the CSN to forward the call to a single number service subscriber directory number specified in the service subscriber profile if the reply is not received before the predetermined period of time lapses.
37. (Currently amended) The method as claimed in claim 36 wherein the single number service subscriber directory number is selected based on a time of day and day of week.
38. (Currently amended) The method as claimed in claim 37 further comprising storing a number of a calling party so that if the reply is received after the calling party has terminated the call, the CSN can use the directory number specified in the reply, and the stored number of the calling party, to send call control messages from the CSN to automatically establish a call between the single number service subscriber and the calling party.